

Claim Status

1. (Currently Amended) An apparatus for making temporary road mats ~~consisting comprising~~ of at least an upper layer and a lower layer, one of said layers including laterally spaced, longitudinally extending timbers, another of said layers including longitudinally spaced, laterally extending timers, said timbers overlying at an array of vertical intersections comprised of longitudinally spaced lateral rows, said apparatus comprising: a frame member; an assembly support ~~carried on said frame member~~ on which said timbers may be roughly assembled thereon into said layers with said intersections; a gang drill assembly supported on said frame member, said gang drill assembly carrying a plurality of drill units above said layers for drilling said lateral rows of intersections; means operatively associated with said frame member and said drill units for selectively aligning said drill units with said lateral rows and for downwardly ~~for~~ moving said drill units to form aligned holes through said timbers at said intersections subsequent to which bolts are inserted into said holes above said timbers and fasteners are connected with said bolts below said timbers resulting in a bolted assembled mat.
2. (Original) The apparatus as recited in claim 1 wherein said gang drill assembly is selectively longitudinally moveable with respect to said frame member.
3. (Currently Amended) The apparatus as recited in claim 1 wherein said gang drill assembly is stationary and said assembly support table is longitudinally moveable with respect to said drill units.
4. (Currently Amended) The apparatus as recited in claim 3 ~~including indexing conveyor means for longitudinally moving said assembly table~~

wherein said assembly support comprises conveyor means for longitudinally moving said timbers to successively align said lateral rows of intersections with said drill units for drilling said through holes.

5. (Currently Amended) The apparatus as recited in claim 4 including an end conveyor and trimming station at one end of said assembly support table for cutting rough timber to length for longitudinally extending timbers and for presenting the same for assembly.

6. (Currently Amended) The apparatus as recited in claim 5 including a first side conveyor and trimming station at one side of said assembly support table for cutting rough timber to length for said laterally extending timbers and for presenting the same for assembly.

7. (Currently Amended) The apparatus as recited in claim 6 wherein said mat includes a top and bottom layer of laterally extending timbers, said first side conveyor and trimming station cutting said rough timber to length for said bottom layer, and a second side conveyor and trimming station on the other side of said assembly support table for cutting rough timber to length for said laterally extending timber of said top layer and for presenting the same for assembly.

8. (Original) The apparatus as recited in claim 1 wherein said drill units include a first bit section for forming said through holes and a second bit section for forming counterbores in said upper layer of timbers.

9. (Original) The apparatus as recited in claim 8 including second drill units for forming counterbores in said lower layer of timbers.

10. (Original) The apparatus as recited in claim 1 including plate means overlying said lateral rows of drilled holes after insertion of said bolts through said through holes to maintain the positions thereof during said fastening.

11. Canceled

12. (Previously Amended) A method of assembling temporary road surfaces having at least three mutually perpendicular layers of elongated members consisting of an upper layer, a middle layer and a bottom layer, the upper layer and lower layer consisting of timbers vertically aligned in one direction and the middle layer consisting of timbers aligned transverse to said upper layer and said middle layer whereby the layers overlap at lateral rows of vertical intersections, said method comprising the steps of: providing an assembly platform aligned in relation to a longitudinal path; orienting said bottom layer on said platform; transversely orienting said middle layer on said bottom layer; orienting said top layer on said middle layer parallel to said bottom layer thereby establishing a roughly assembled mat wherein the layers vertically overlap at lateral rows and longitudinal columns of intersections; providing a drill assembly including a plurality of drilling units aligned for concurrently drilling through holes in unison through intersections in a said lateral rows; serially indexing the roughly assembled mat with respect to said drilling units; drilling said through holes through each row of intersection until all required holes in said mat are completed; and inserting bolts through each row of drilled holes following the drilling thereof; and fastening nuts to the inserted bolts thereby compressively clamping the layers together at said intersections.

13. (Original) The method as recited in claim 12 wherein said serially indexing is provided by moving the drilling units with respect to said roughly assembled mat.

14. (Original) The method as recited in claim 13 wherein said serially indexing is provided by moving the roughly assembled mat with respect to fixedly longitudinally located drilling units.

15. Canceled

16. (Original) A bolted three ply temporary road mat comprising; a bottom layer of elongated timbers aligned in parallel rows in a first direction; a middle layer of elongated timbers aligned in parallel rows on said bottom layer extending to a second direction transverse to said first direction; a top layer of elongated timbers aligned in parallel rows on said middle layer and vertically aligned with said timbers of said bottom layer whereby said timbers of said layer overlie at an array of vertically aligned intersecting surfaces; through hole formed through said timbers at said intersecting surfaces; and bolts having threaded shanks extending through said through holes with heads engaging the upper surface of said timbers of said top layer; and nuts threaded on said shanks and compressively engaging the lower surface of said timbers of said bottom layer thereby forming a bolted composite assembly of timbers.